**IN THE CLAIMS**

***Kindly replace the claims of record with the following full set of claims:***

1. (Currently amended) A method of correcting video data signals for addressing an active matrix display device, the device comprising a power line (10) arranged to supply current to n electroluminescent display elements (11), the current supplied to each element being controllable by a respective drive transistor (20), each drive transistor being addressable by video data signals and having an electrical characteristic parameter X, the method comprising the steps of:

(i) – storing the X value for each drive transistor;

(ii) – receiving a set of video data signals, each having a value $v_d$, said video data signals corresponding to an image to be displayed;.

(iii) – determining from the stored X values and the received $v_d$ values an expected current through the power line $i_p$ using a model which relates the power line current to the $v_d$ and the X values of the drive transistors;

(iv) – measuring [[the]] a current $i_m$ through the power line when the drive transistors are each addressed with the received set of video data signals;

(v) – calculating a difference, g, between the expected current $i_p$ and the measured current $i_m$;

(vi) – repeating steps (ii) to (v) for at least n-1 further sets of video data signals;

(vii) – calculating an X value for each transistor using the calculated g values;

(viii) – replacing the stored X values with the calculated X values; and

(ix) – correcting subsequent video data signals in accordance with the stored X values. (see page 11, lines

2. (Previously presented) A method according to claim 1, wherein the method further comprises the steps of:

(x) - storing the g values in a column vector G having a length n; and,

(xi) - performing an iterative Newton Linearisation process using vector G to obtain the X value for each transistor.

3. (original) A method according to claim 2, wherein said Newton Linearisation process includes the steps of:

(xii) - differentiating vector G to obtain an n x n matrix G';

(xiii) - solving the equation:

$$G'(X).\delta X = -G(X)$$

for $\delta X$;

(xiv) - calculating an updated value for X for each transistor according to $\delta X$;

(xv) – calculating updated $g_i$ values using the updated X value; and,

(xvi) – repeating steps (xii) to (xv) until the g values are within a predetermined range around zero.

4. (Previously presented) A method according to claim 1, wherein said sets of video data signals have predetermined values $V_d$ to enable successful calculation of said X values in step (vii).

5. (Previously presented) A method according to claim 1, wherein steps (ii) to (vii) are repeated periodically.

6. (Previously presented) A method according to claim 1 carried out in response to switching on of said display device.

7. (Previously presented) A method according to claim 1, wherein said electrical characteristic parameter X is a threshold voltage $v_t$ of the transistor.

8. (original) A method according claim 7, wherein said model is based upon the relationship given by the equation:

$$i_{LED} = K(v_d - v_t)^2$$

in which $i_{LED}$ is the current controlled by one drive transistor and K is a constant.

9. (Currently amended) Apparatus for correcting video data signals for addressing an active matrix display device, the device comprising a power line (10) arranged to supply current to n electroluminescent display elements (11), the current supplied to each element being controllable by a respective drive

transistor (20), each drive transistor being addressable by video data signals each having a value $v_d$ and having an electrical characteristic parameter X, the apparatus comprising

- means (30) for storing the X value for each drive transistor;

- means for applying a model to determine an expected current through the power line using the stored X values and video data signal values $v_d$, said video data signals corresponding to an image to be displayed;

- means (32) for measuring [[the]] a current through the power line;

- means for applying an algorithm to said expected current and said measured current for a plurality of sets of video data signals to determine X values for each drive transistor;

- correction circuitry for modifying received video data signals in accordance with the stored X values.

10. (Currently amended) An integrated circuit chip (25) comprising [[the]] an apparatus for correcting video data signals for addressing an active matrix display device, the device comprising a power line (10) arranged to supply current to n electroluminescent display elements (11), the current supplied to each element being controllable by a respective drive transistor (20), each drive transistor being addressable by video data signals each having a value $v_d$ and having an electrical characteristic parameter X, the apparatus comprising

- means (30) for storing the X value for each drive transistor;

- means for applying a model to determine an expected current through the power line using the stored X values and video data signal values $v_d$, said video data signals corresponding to an image to be displayed;

- means (32) for measuring a current through the power line;

- means for applying an algorithm to said expected current and said measured current for a plurality of sets of video data signals to determine X values for each drive transistor;

- correction circuitry for modifying received video data signals in accordance with the stored X values. ~~according to claim 9~~.

11. (Currently amended) An active matrix display device comprising a plurality of power lines (10), each arranged to supply current to a respective plurality of electroluminescent display elements (11), the current supplied to each element being controllable by a respective drive transistor (20), each drive transistor being addressable by respective video data signals, said video data signals corresponding to an image to be displayed, wherein the display device further comprises apparatus according to claim 9 for correcting video data signals supplied to said transistors associated with each power line.